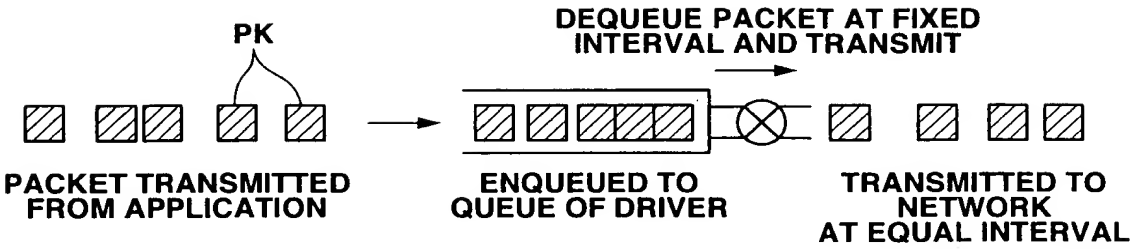

FIG.1

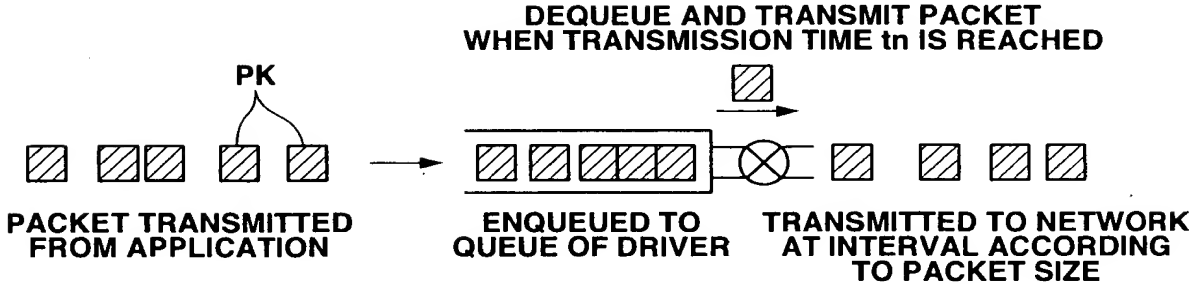

FIG.2

EP 0 774 850 A1

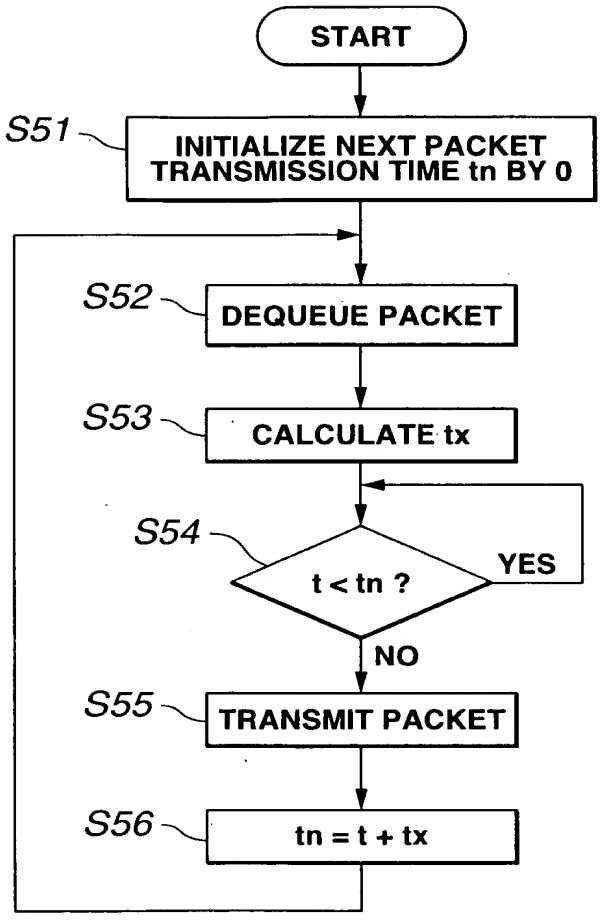
START
S51
INITIALIZE NEXT PACKET TRANSMISSION TIME tn BY 0
S52
DEQUEUE PACKET
S53
CALCULATE tx
S54
t < tn ?
YES
NO
S55
TRANSMIT PACKET
S56
tn = t + tx

FIG.3

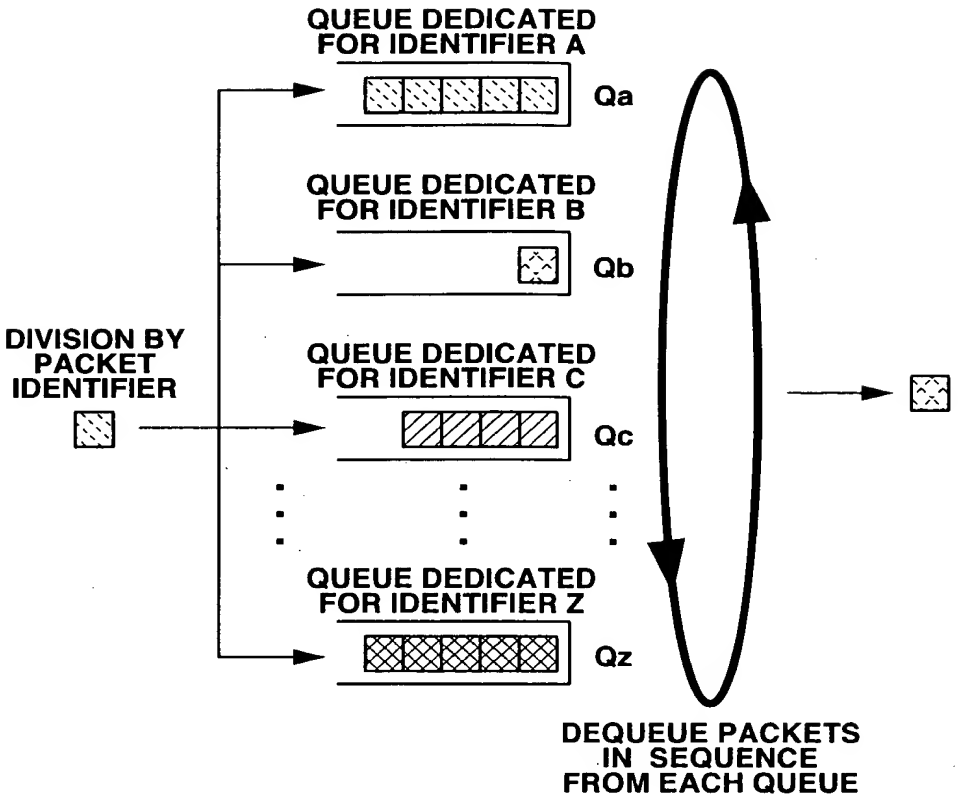

FIG.4

Version	HLength	Type Of Service	Total Length	
identification			flag	Fragment Offset
Time To Live		Protocol	Header Checksum	
Source IP Address				
Destination IP Address				
Source Port Number			Destination Port Number	

FIG.5

EP 0 764 904 A2

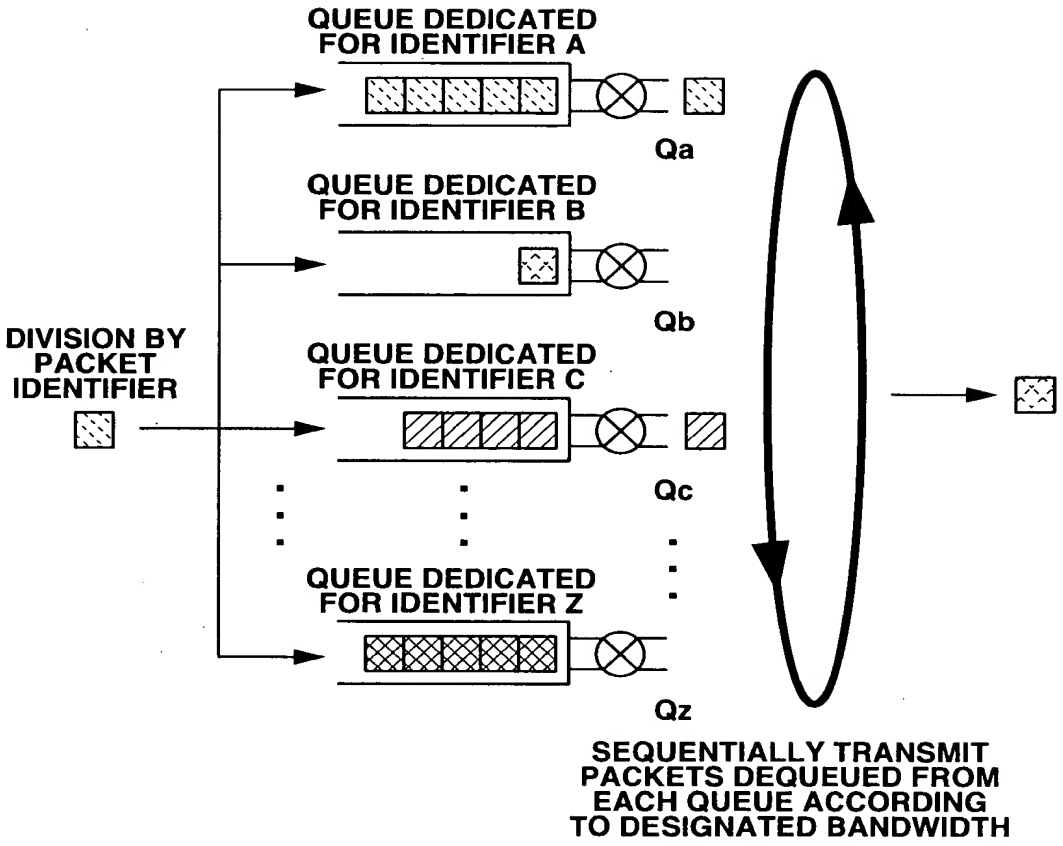

FIG.6

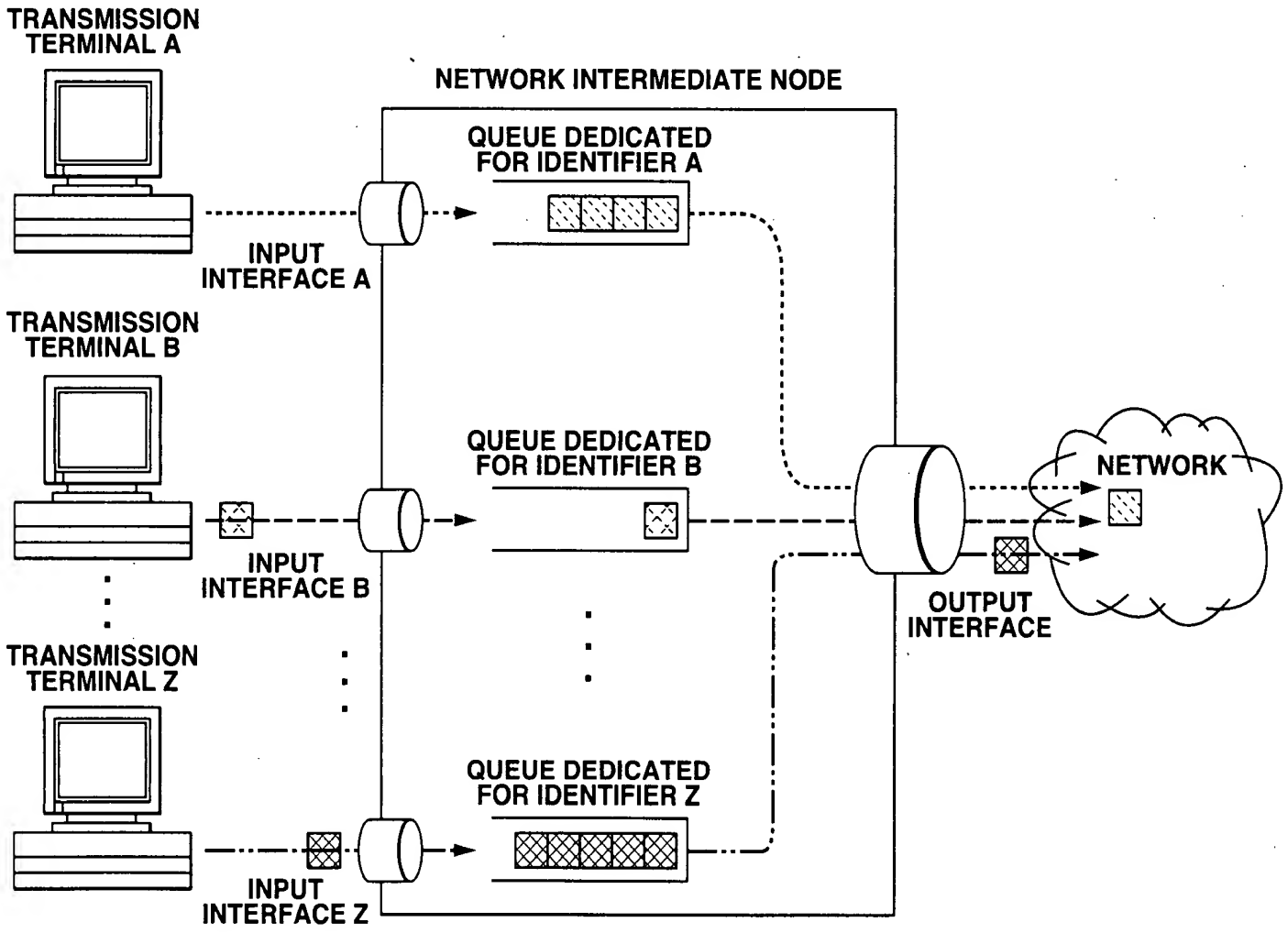
TRANSMISSION TERMINAL A
NETWORK INTERMEDIATE NODE
QUEUE DEDICATED FOR IDENTIFIER A
INPUT INTERFACE A
TRANSMISSION TERMINAL B
QUEUE DEDICATED FOR IDENTIFIER B
NETWORK
INPUT INTERFACE B
OUTPUT INTERFACE
TRANSMISSION TERMINAL Z
QUEUE DEDICATED FOR IDENTIFIER Z
INPUT INTERFACE Z

FIG.7

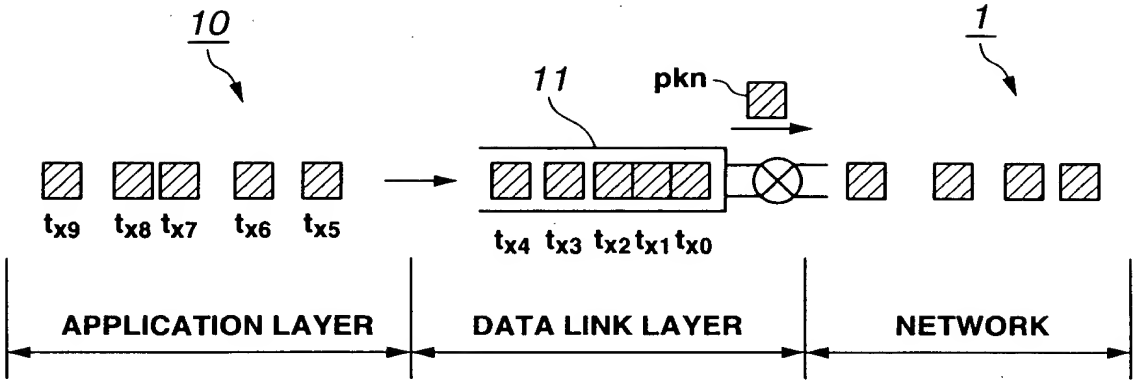
10
1
11
pkn
t_{x9} t_{x8} t_{x7} t_{x6} t_{x5}
t_{x4} t_{x3} t_{x2} t_{x1} t_{x0}
APPLICATION LAYER
DATA LINK LAYER
NETWORK

FIG.8

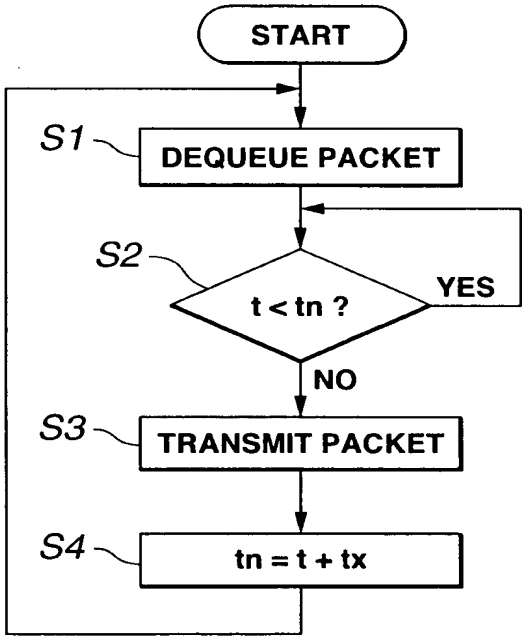
START
S1
DEQUEUE PACKET
S2
t < tn ?
YES
NO
S3
TRANSMIT PACKET
S4
tn = t + tx

FIG.9

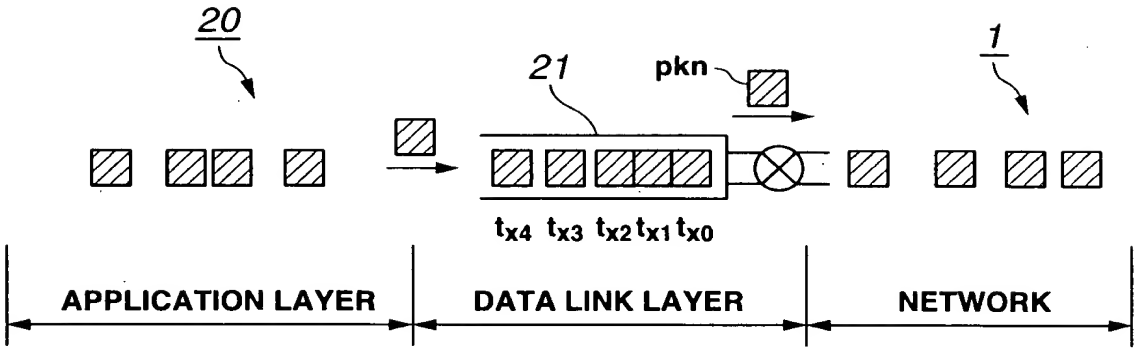

FIG.10

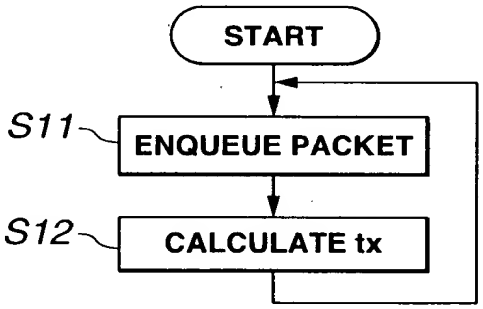

FIG.11

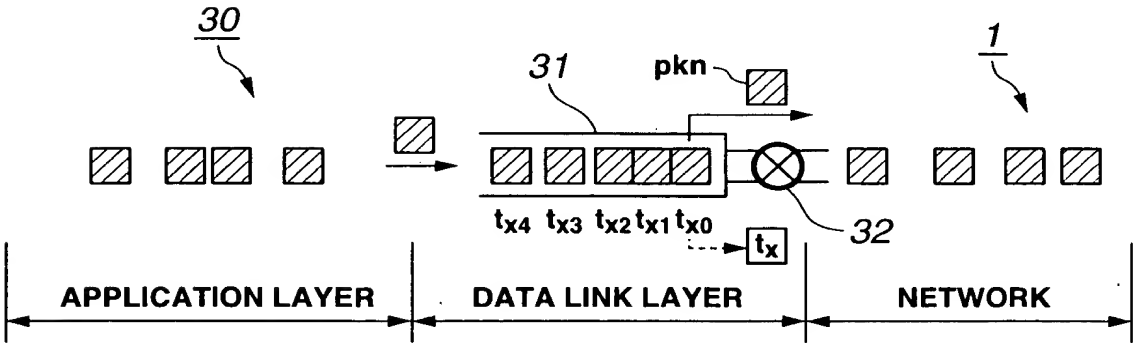

FIG.12

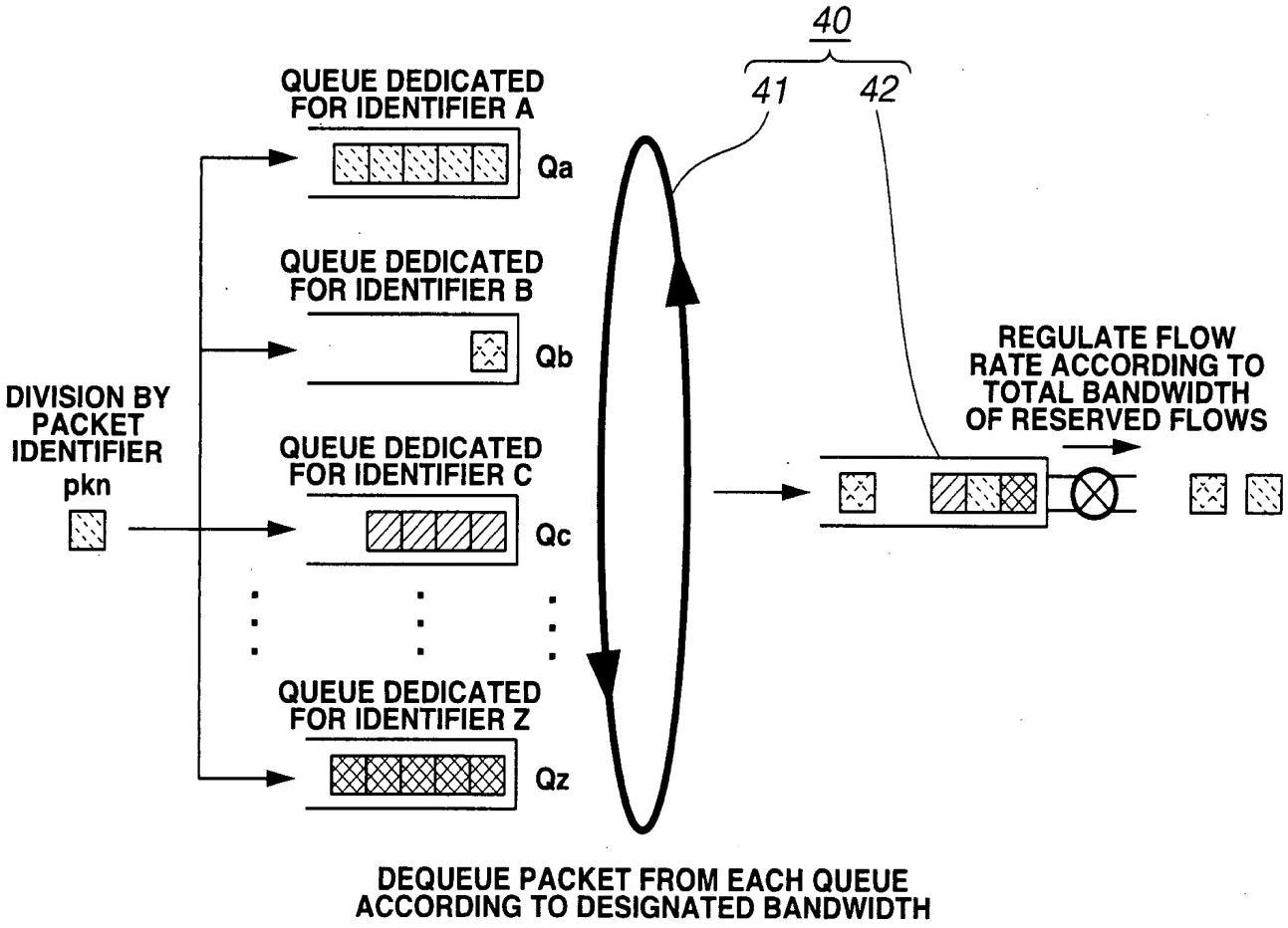
40
41
42
QUEUE DEDICATED FOR IDENTIFIER A
Qa
QUEUE DEDICATED FOR IDENTIFIER B
Qb
QUEUE DEDICATED FOR IDENTIFIER C
Qc
QUEUE DEDICATED FOR IDENTIFIER Z
Qz
DIVISION BY PACKET IDENTIFIER
pkn
REGULATE FLOW RATE ACCORDING TO TOTAL BANDWIDTH OF RESERVED FLOWS
DEQUEUE PACKET FROM EACH QUEUE ACCORDING TO DESIGNATED BANDWIDTH

FIG.13

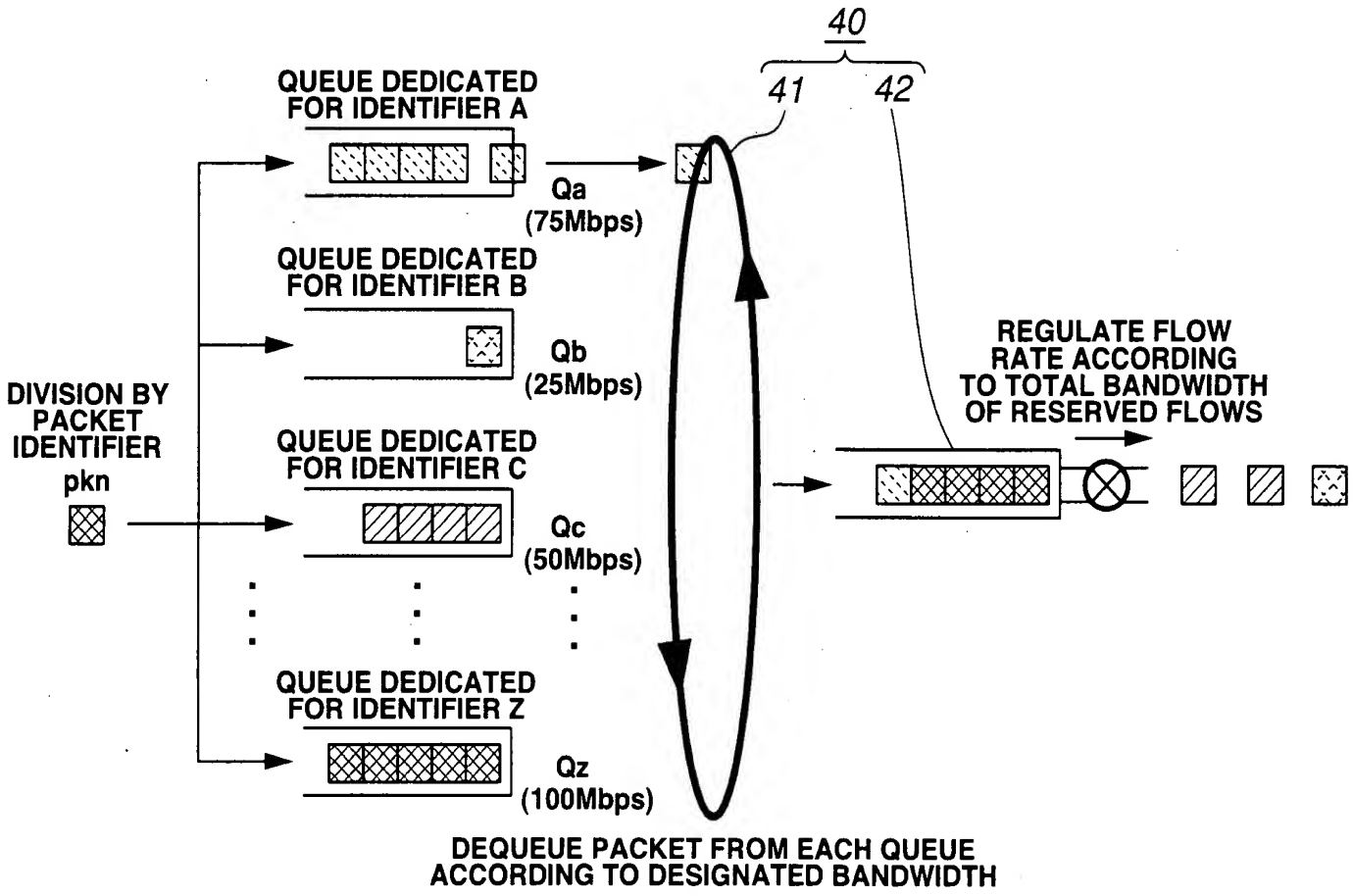
40
41
42
QUEUE DEDICATED FOR IDENTIFIER A
Qa
(75Mbps)
QUEUE DEDICATED FOR IDENTIFIER B
Qb
(25Mbps)
QUEUE DEDICATED FOR IDENTIFIER C
Qc
(50Mbps)
QUEUE DEDICATED FOR IDENTIFIER Z
Qz
(100Mbps)
DIVISION BY PACKET IDENTIFIER
pkn
REGULATE FLOW RATE ACCORDING TO TOTAL BANDWIDTH OF RESERVED FLOWS
DEQUEUE PACKET FROM EACH QUEUE ACCORDING TO DESIGNATED BANDWIDTH

FIG.14

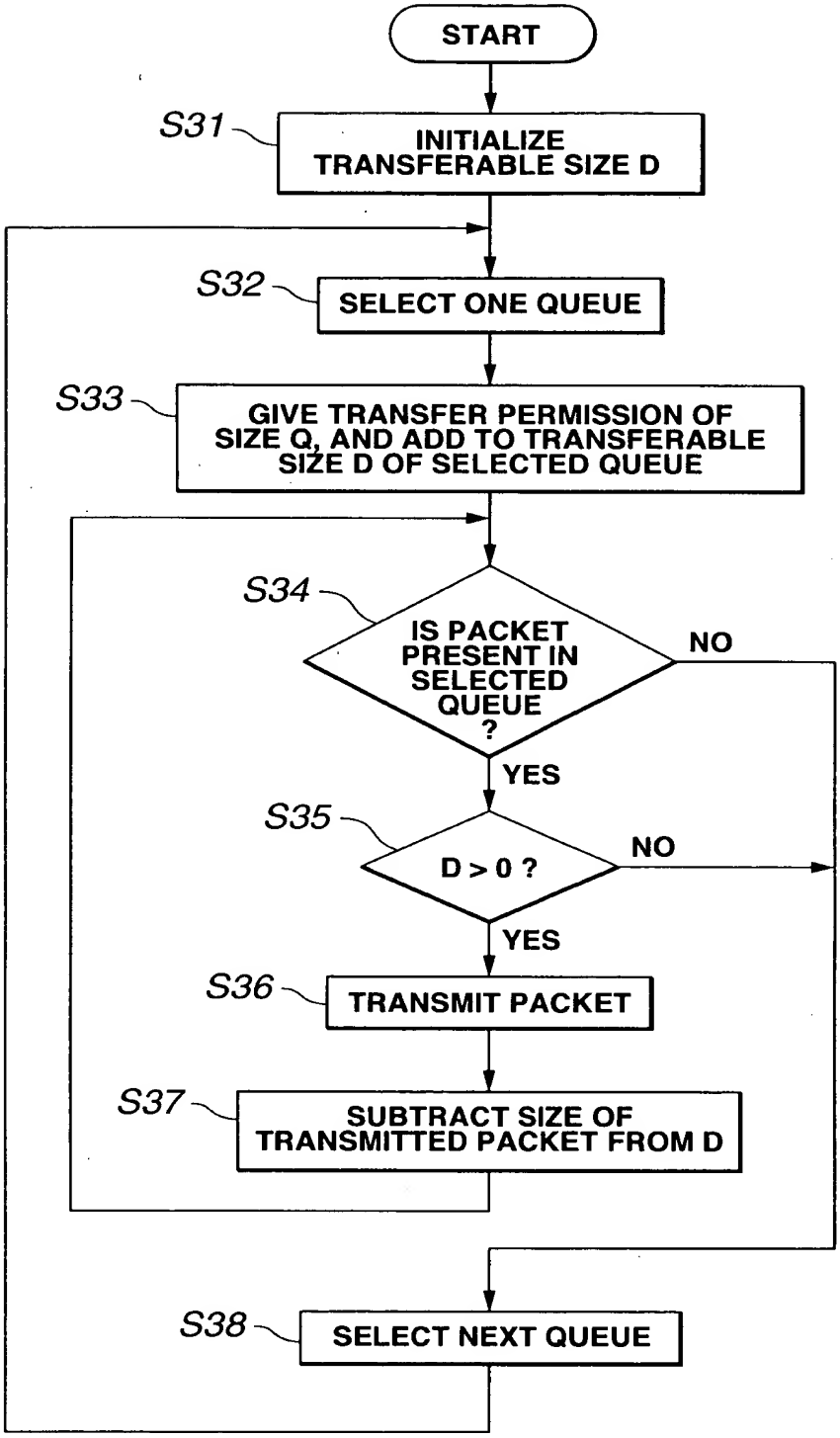
START
S31
INITIALIZE TRANSFERABLE SIZE D
S32
SELECT ONE QUEUE
S33
GIVE TRANSFER PERMISSION OF SIZE Q, AND ADD TO TRANSFERABLE SIZE D OF SELECTED QUEUE
S34
IS PACKET PRESENT IN SELECTED QUEUE ?
NO
YES
S35
D > 0 ?
NO
YES
S36
TRANSMIT PACKET
S37
SUBTRACT SIZE OF TRANSMITTED PACKET FROM D
S38
SELECT NEXT QUEUE

FIG.15

T0ZTT0" 598T9Z60

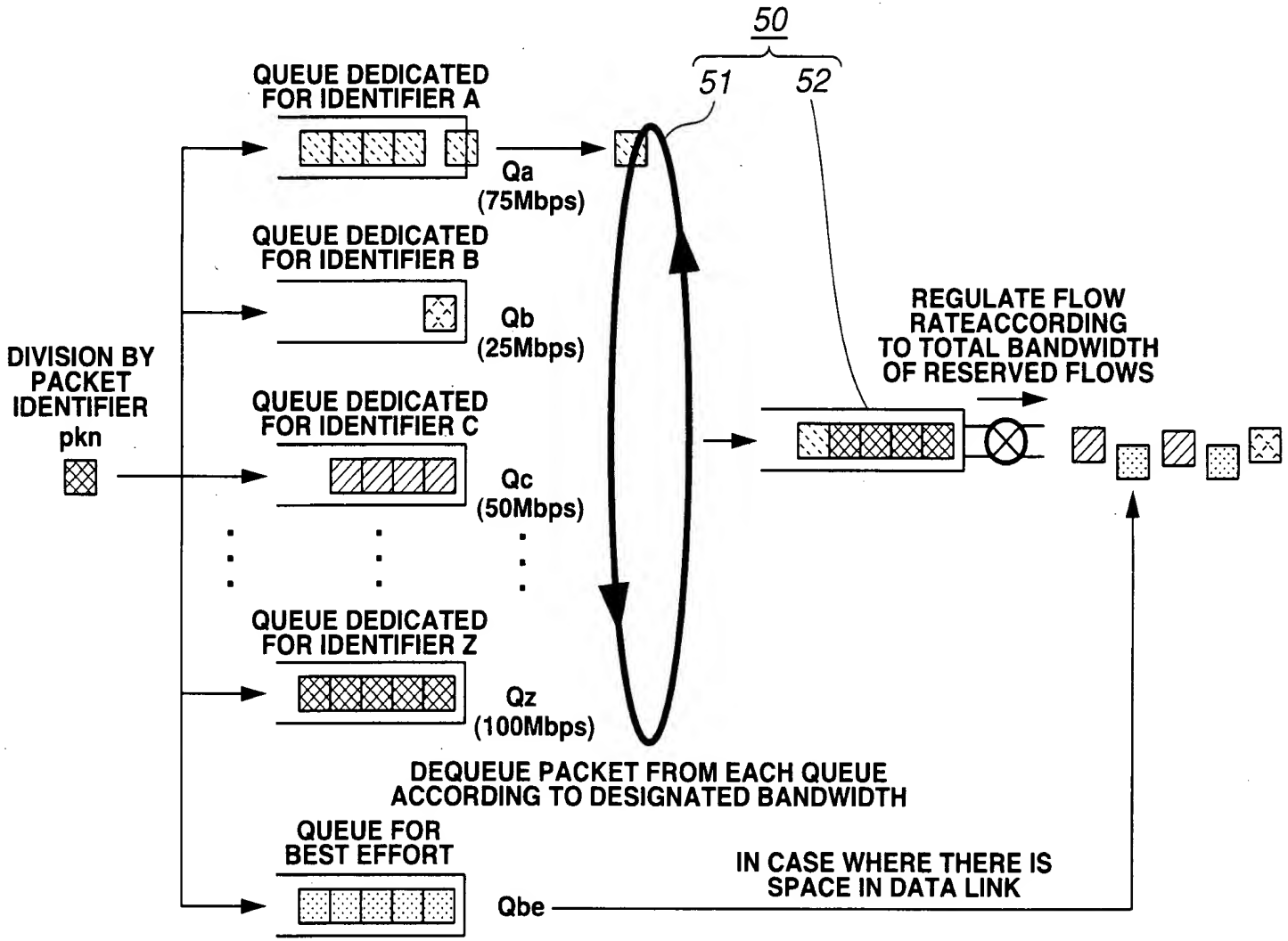

FIG.16

TO2FTO"98T9260

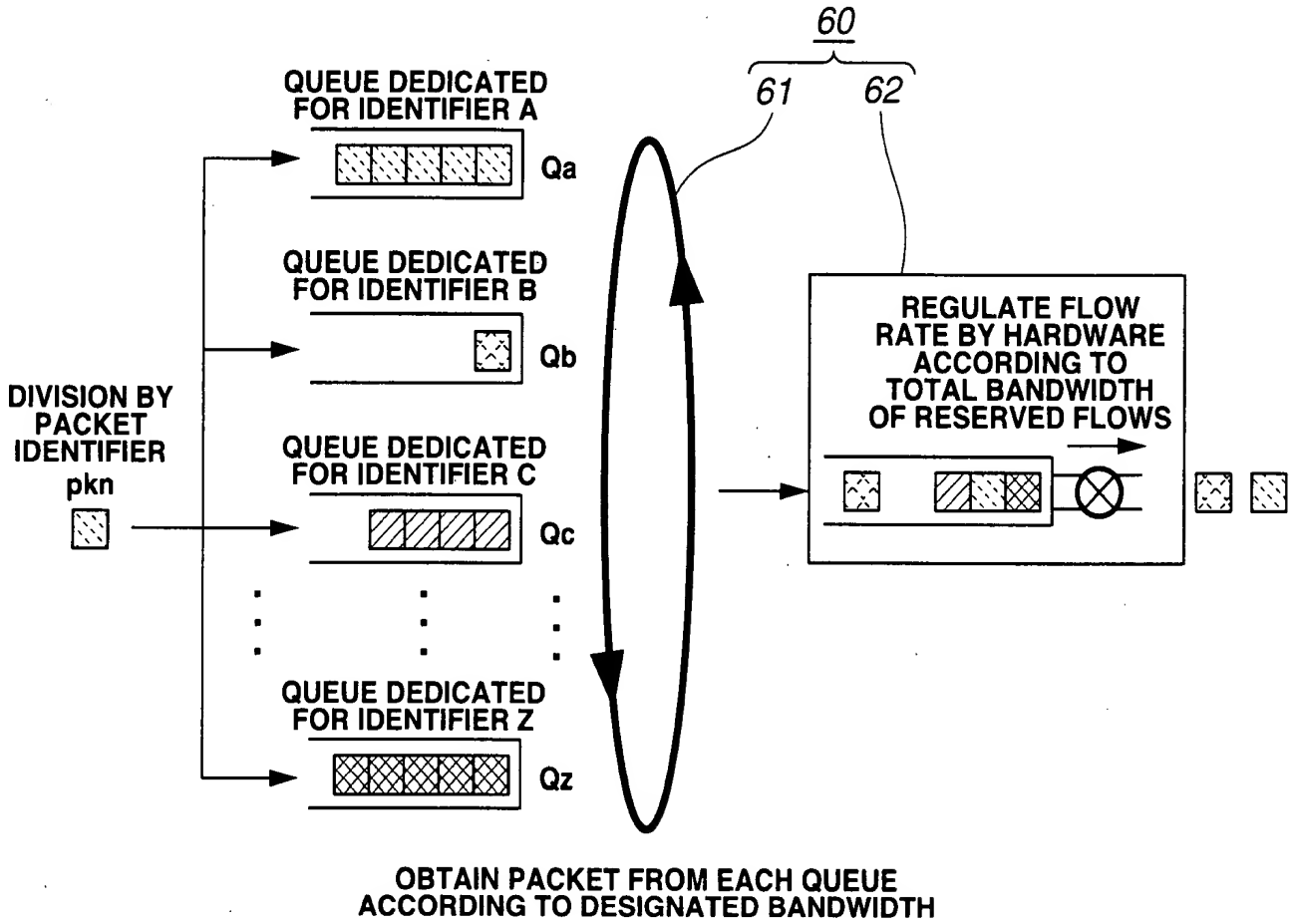

FIG.17

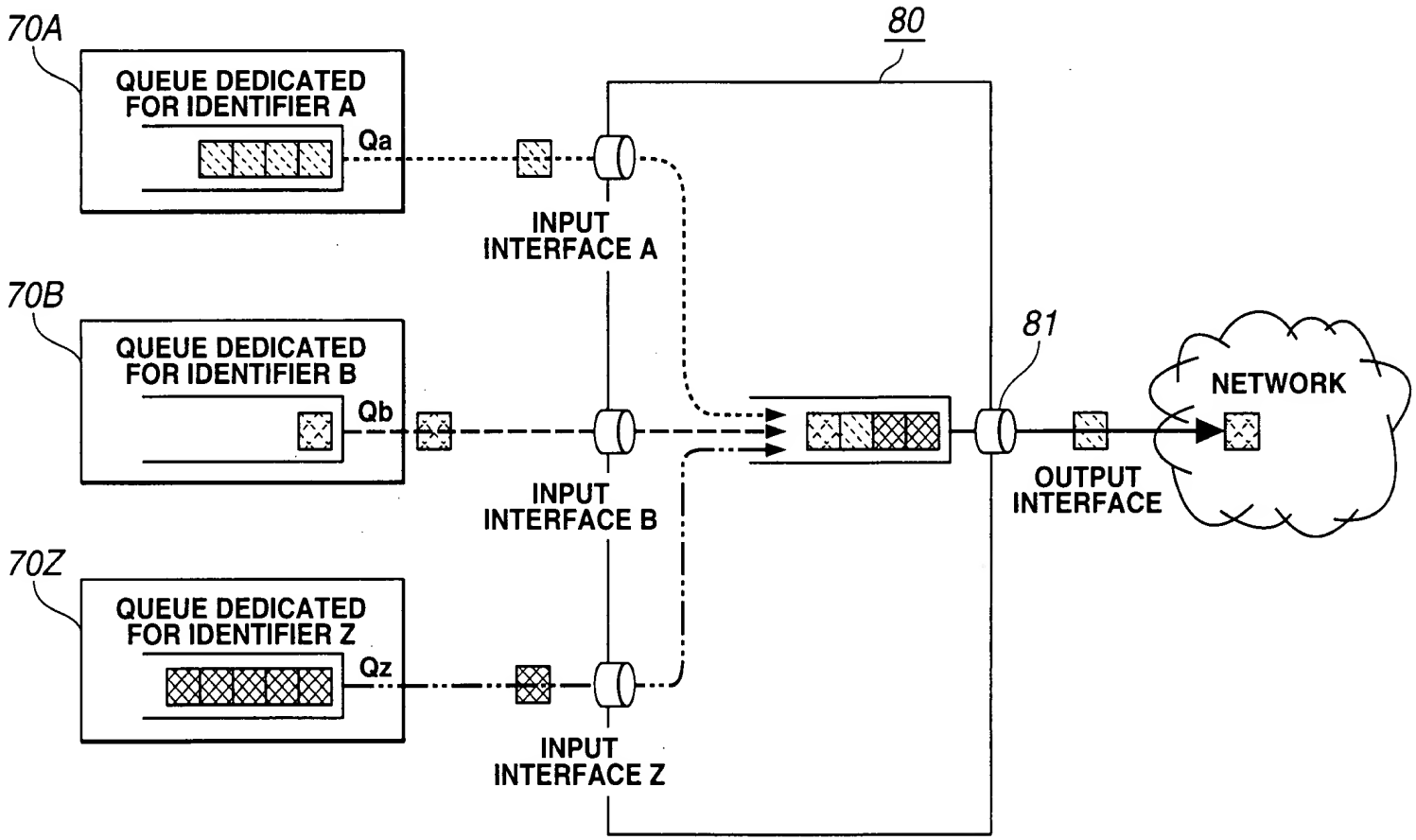
70A
QUEUE DEDICATED FOR IDENTIFIER A
Qa
INPUT INTERFACE A
80
70B
QUEUE DEDICATED FOR IDENTIFIER B
Qb
INPUT INTERFACE B
81
NETWORK
OUTPUT INTERFACE
70Z
QUEUE DEDICATED FOR IDENTIFIER Z
Qz
INPUT INTERFACE Z

FIG.18

EP 0 598 960 A2

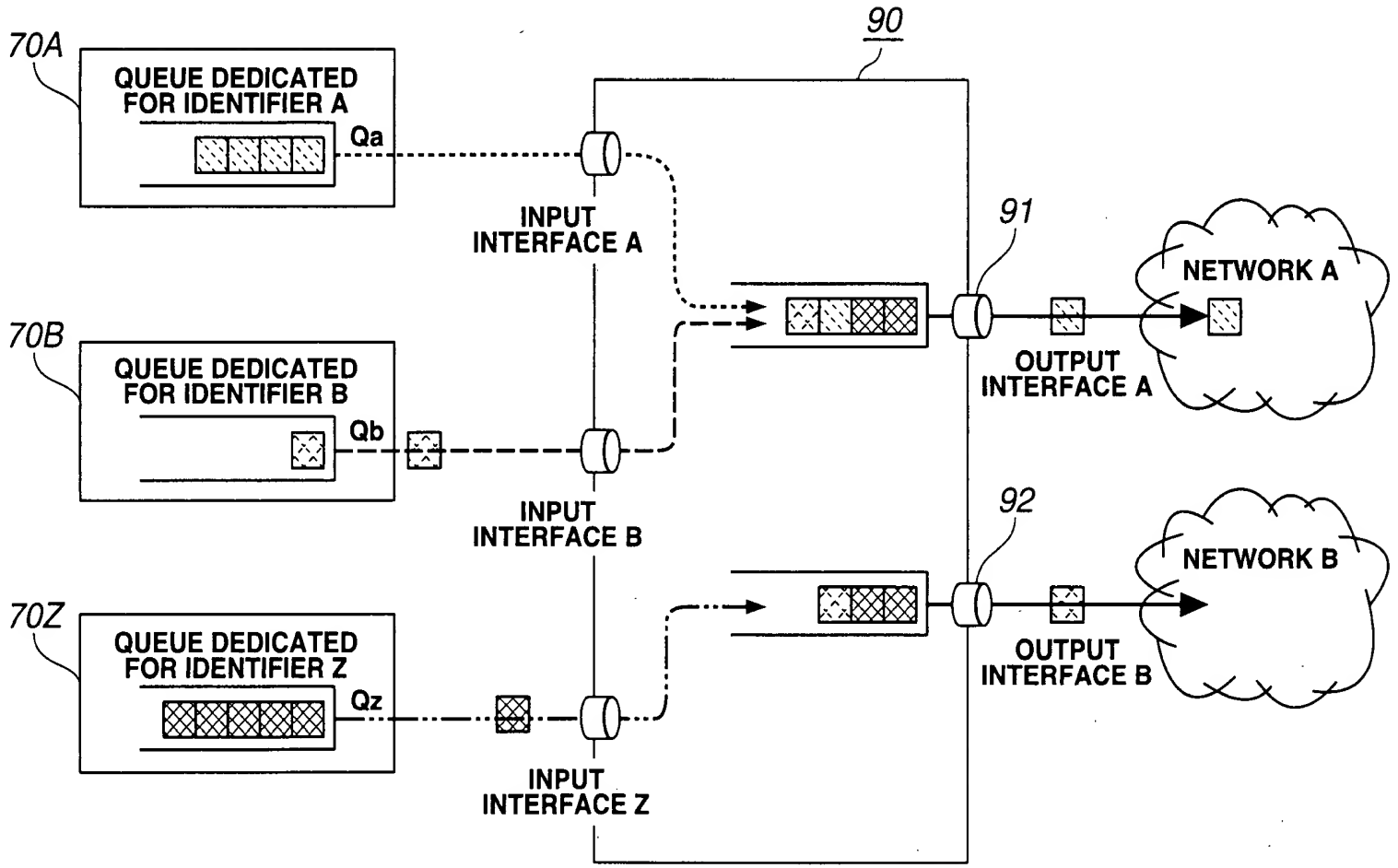

FIG.19

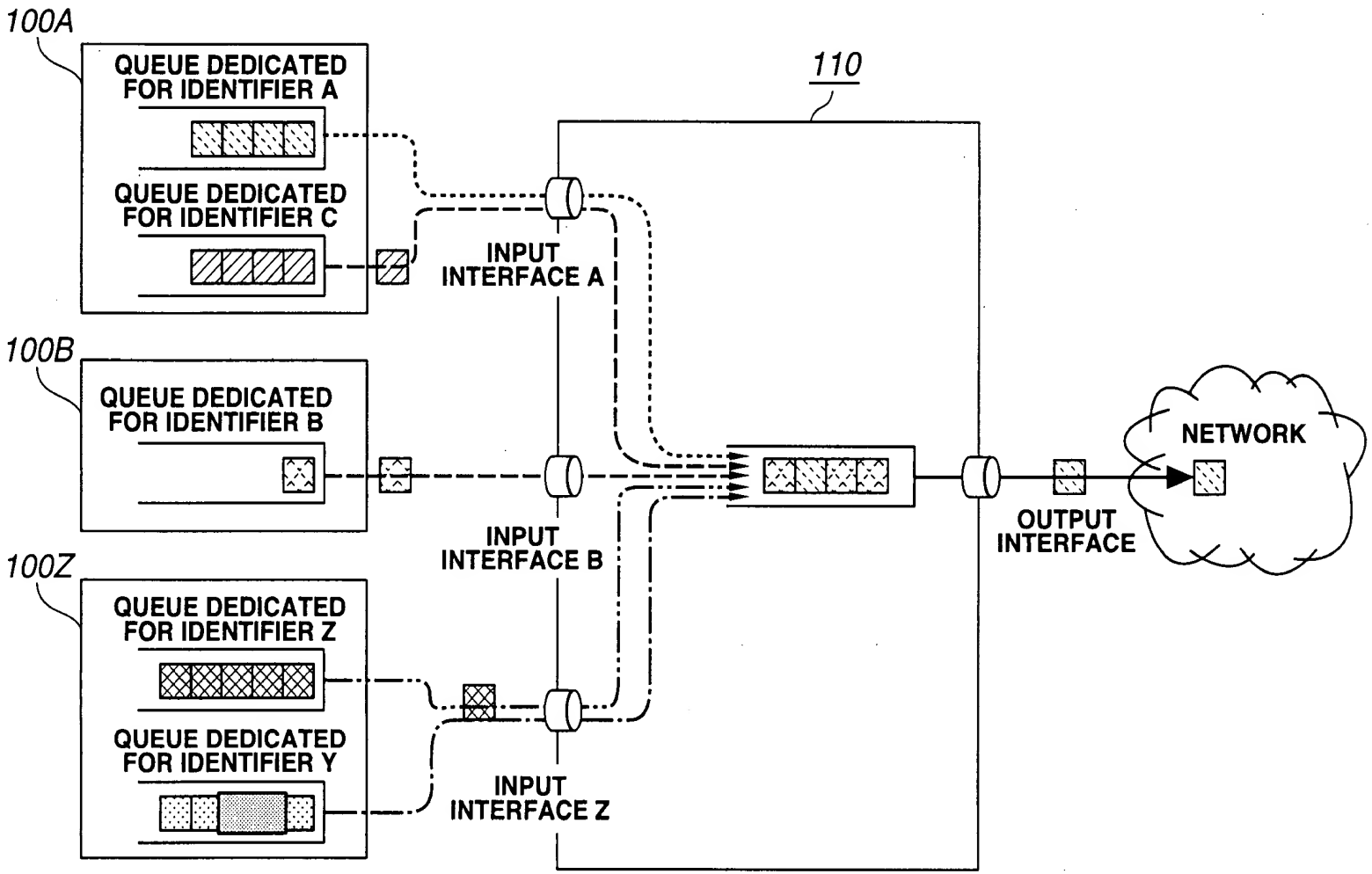
100A
QUEUE DEDICATED FOR IDENTIFIER A
QUEUE DEDICATED FOR IDENTIFIER C
110
INPUT INTERFACE A
100B
QUEUE DEDICATED FOR IDENTIFIER B
INPUT INTERFACE B
NETWORK
OUTPUT INTERFACE
100Z
QUEUE DEDICATED FOR IDENTIFIER Z
QUEUE DEDICATED FOR IDENTIFIER Y
INPUT INTERFACE Z

FIG.20

EP 2 778 960 A1

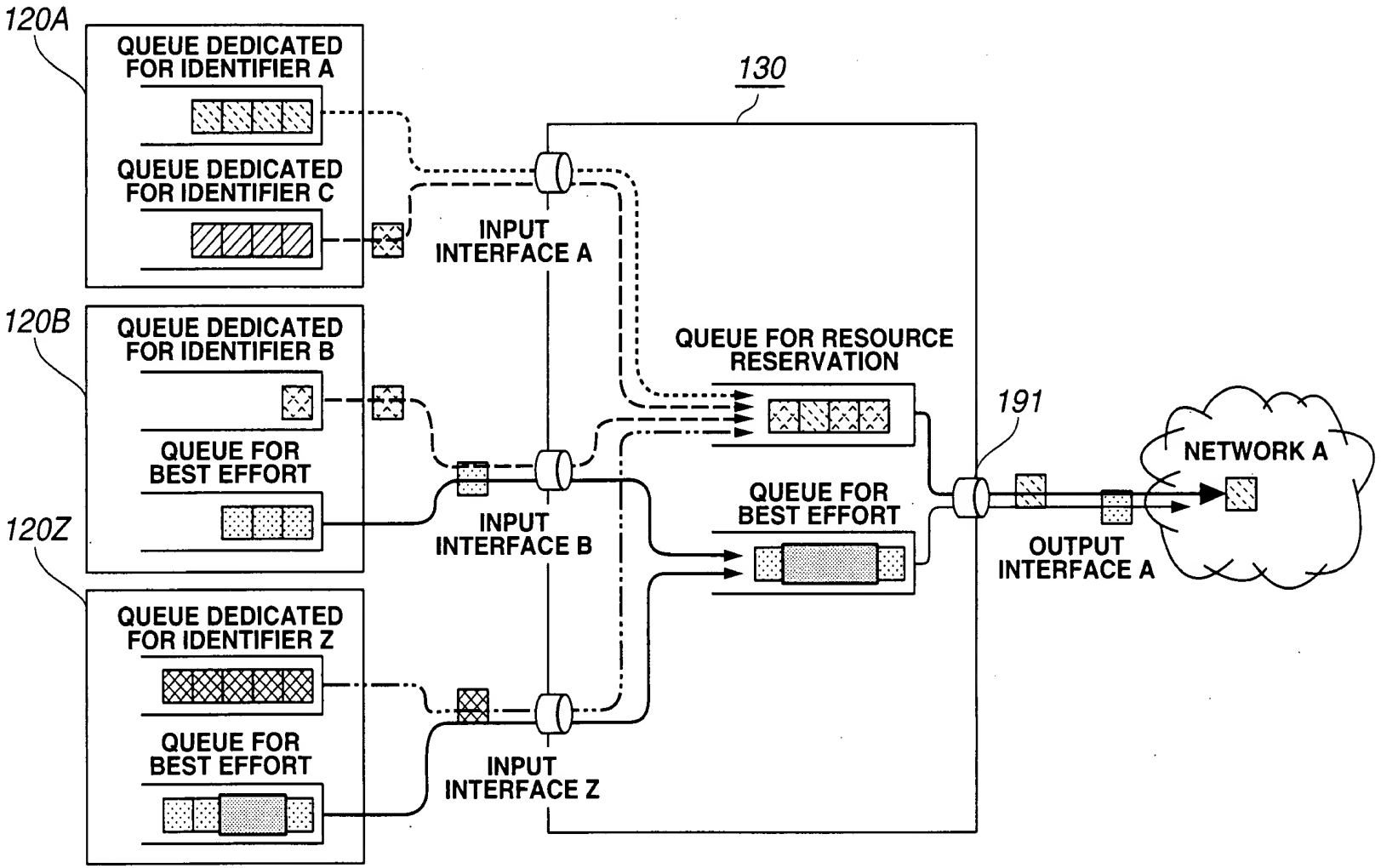

FIG.21

TOZTTO"5987960

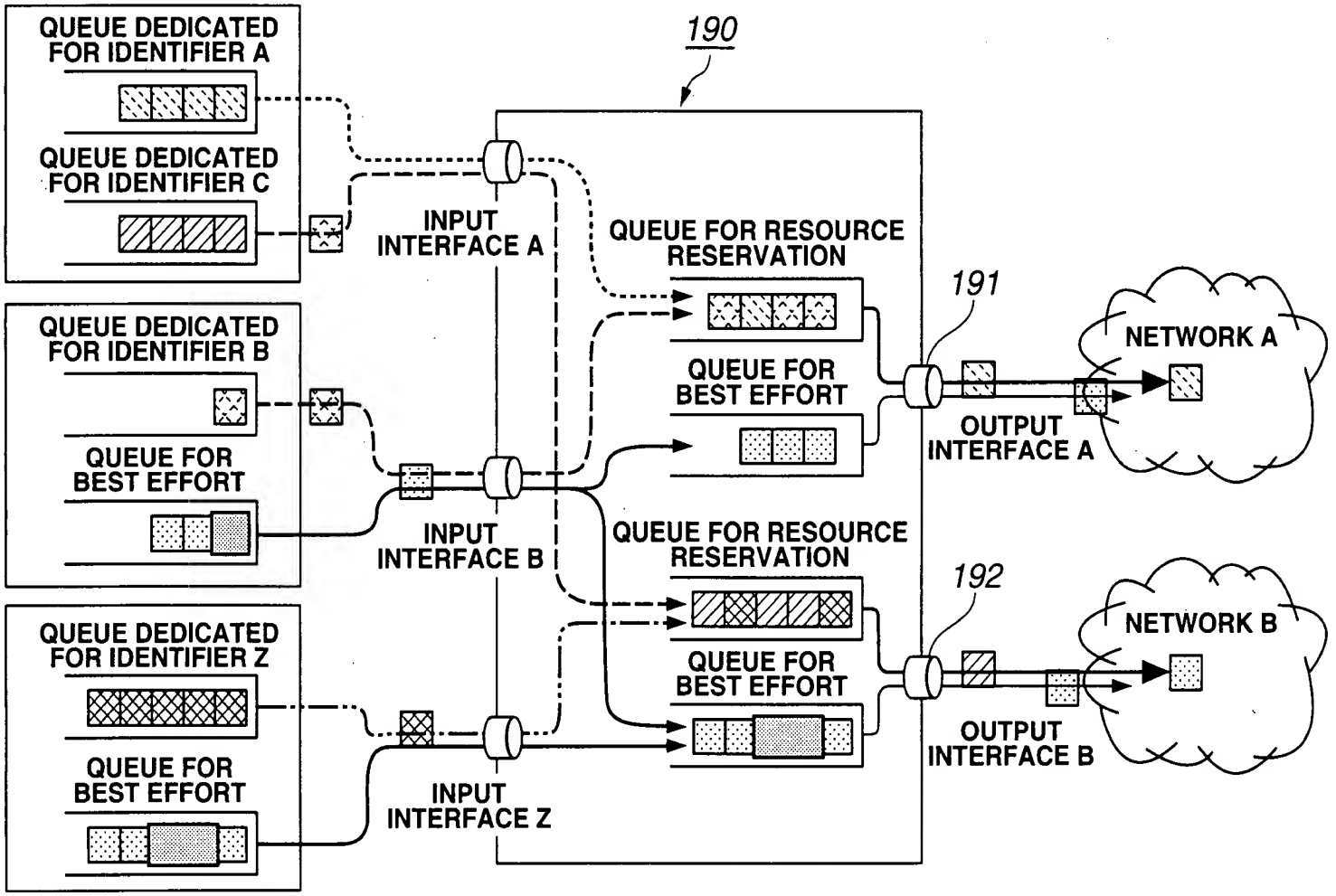

FIG.22